

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1-52 (canceled).

Claim 53 (previously presented): A system that is useable to guide the advancement of a guidewire from a location within the lumen of a blood vessel to a target location within or outside of the wall of that blood vessel, said system comprising:

an elongate flexible catheter body that is advanceable through the vasculature into said blood vessel lumen, said catheter body having a side wall and at least one lumen extending longitudinally therethrough;

an opening formed in the side wall of said catheter body;

a single tissue penetrating element having a lumen, a tissue penetrating distal tip and a distal end opening, said tissue penetrating element being alternately disposable in;

a) a first position wherein the tissue penetrating element is substantially within the catheter body; and

b) a second position wherein the tissue penetrating element assumes a predetermined curved configuration and extends out of the opening formed in the side wall of said catheter body so as to penetrate a wall of the blood vessel adjacent to the blood vessel lumen in which the catheter is positioned; and

a guidewire that is advanceable through the lumen of the tissue penetrating element while the tissue penetrating element is in the second position;

an imaging apparatus on or in the catheter body and useable to image the target location; and

electronic marker circuitry associated with the imaging apparatus to form, on an image received from the imaging apparatus, an indication one or more imageable markers useable in conjunction with an imaging apparatus to provide an image indicative of the trajectory on which the tissue penetrating element will advance while the tissue penetrating element is still in the first position, thereby facilitating adjustment of the rotational orientation of

the catheter body within the blood vessel while the penetrating element is in the first position so that subsequent advancement of the tissue penetrating element to the second position will cause the tissue penetrating element to advance in the direction of the target location.

Claim 54 (previously presented): A system according to claim 53 further comprising an anchoring member, said anchoring member being deployable when the catheter body is inserted into an anatomical lumen such that a surface of the anchoring member will engage a wall of the anatomical lumen thereby preventing at least a portion of the catheter body from undergoing substantial movement within the anatomical lumen.

Claim 55 (previously presented): A system according to claim 54 wherein the anchoring member comprises a balloon.

Claim 56 (previously presented): A system according to claim 54 further comprising a friction enhancing treatment upon a surface of the anchoring member.

Claim 57 (previously presented): A system according to claim 56 wherein said friction enhancing treatment is selected from the group of friction enhancing treatments consisting of:

texturing;
adhesive; and,
woven fabric.

Claim 58 (cancelled)

Claim 59 (cancelled)

Claim 60 (cancelled)

Claim 61 (cancelled)

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Claim 62 (previously presented): A system according to claim 61 wherein the imaging apparatus comprises an intravascular ultrasound imaging apparatus.

Claim 63 (previously presented): A system according to claim 58 wherein the catheter body has a lumen into which the imaging apparatus is inserted.